

Create a Picture Using Equations, Inequalities, and/or Systems of Inequalities

Create a picture by graphing a variety of equations, inequalities and/or systems of inequalities.

You may use:

Points

Lines

Circles

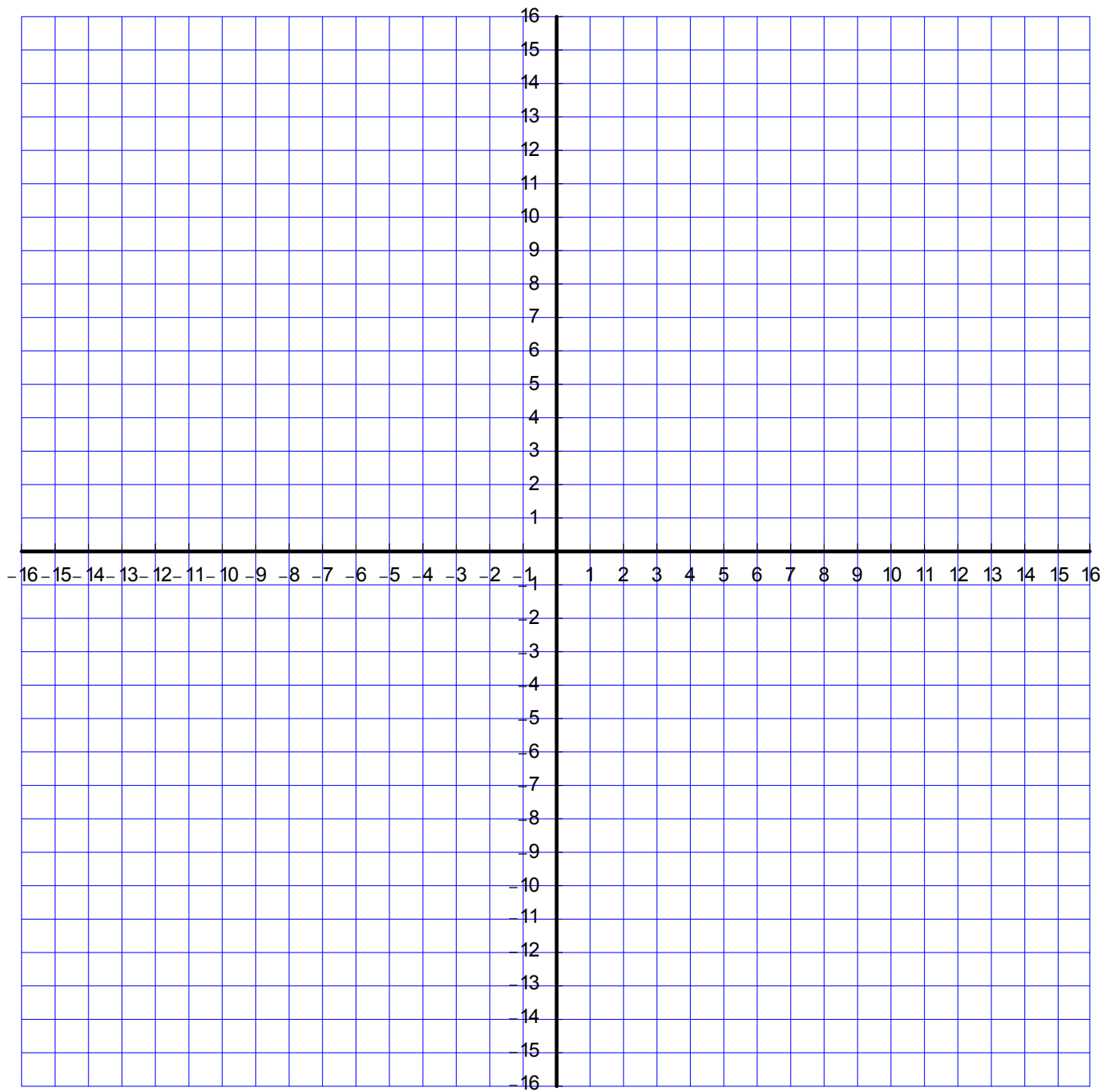
Parabolas,

Other functions or relations.

You must use **AT LEAST** 10 equations/inequalities in your picture.

List the equations/inequalities that you used in creating your picture, including any restrictions on x (or y).

Label the graphs in your picture to correspond to the respective equations/inequalities.



1) _____

3) _____

5) _____

7) _____

9) _____

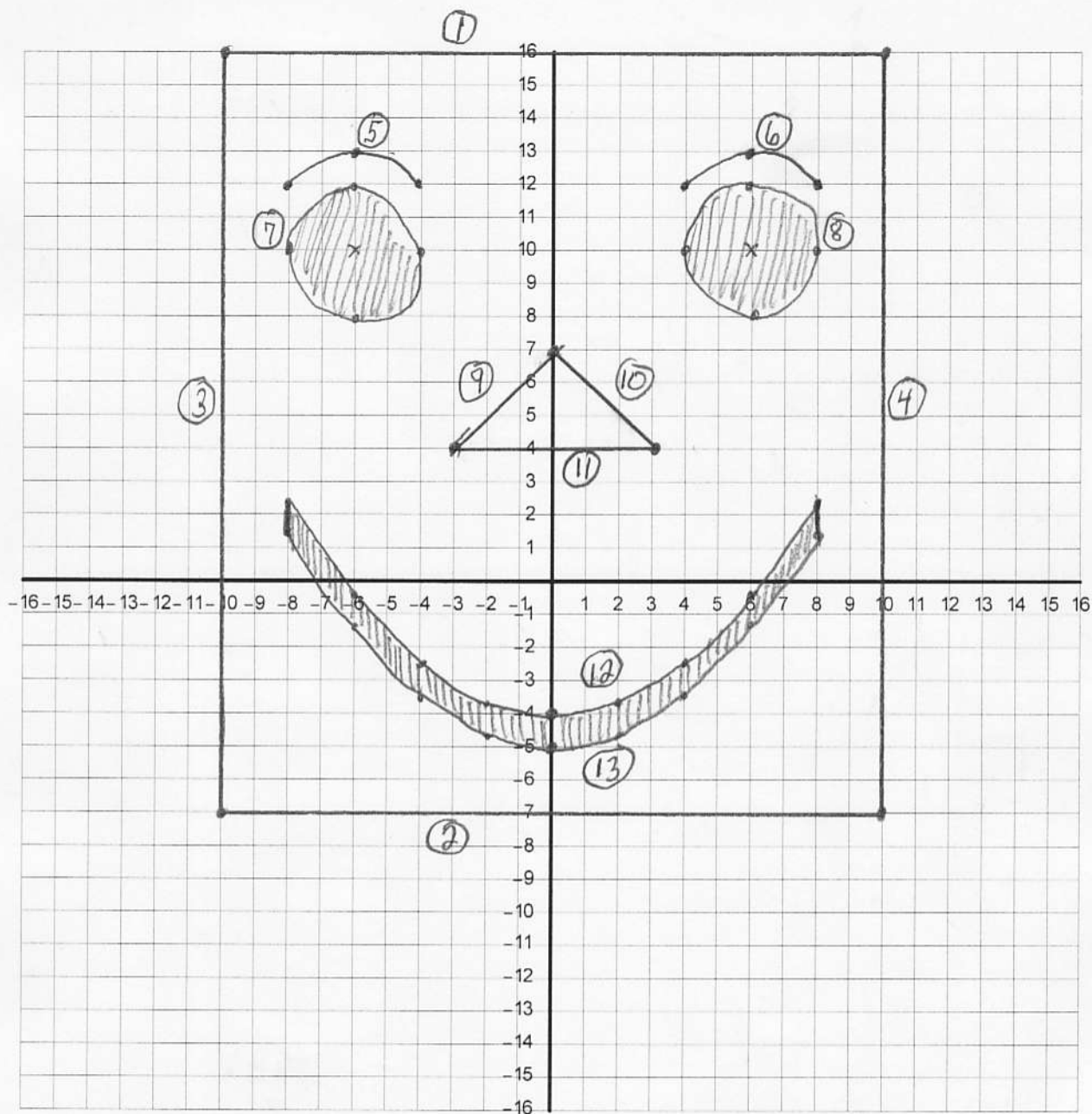
2) _____

4) _____

6) _____

8) _____

10) _____



1) $y = 16$ for $-10 \leq x \leq 10$

3) $x = -10$ for $-7 \leq y \leq 16$

5) $y = -\frac{1}{4}(x+6)^2 + 13$ for $-8 \leq x \leq -4$

7) $(x+6)^2 + (y-10)^2 \leq 4$

9) $y = x+7$ for $-3 \leq x \leq 0$

11) $y = 4$ for $-3 \leq x \leq 3$

12) $y \leq 0.1x^2 - 4$ for $-8 \leq x \leq 8$

2) $y = -7$ for $-10 \leq x \leq 10$

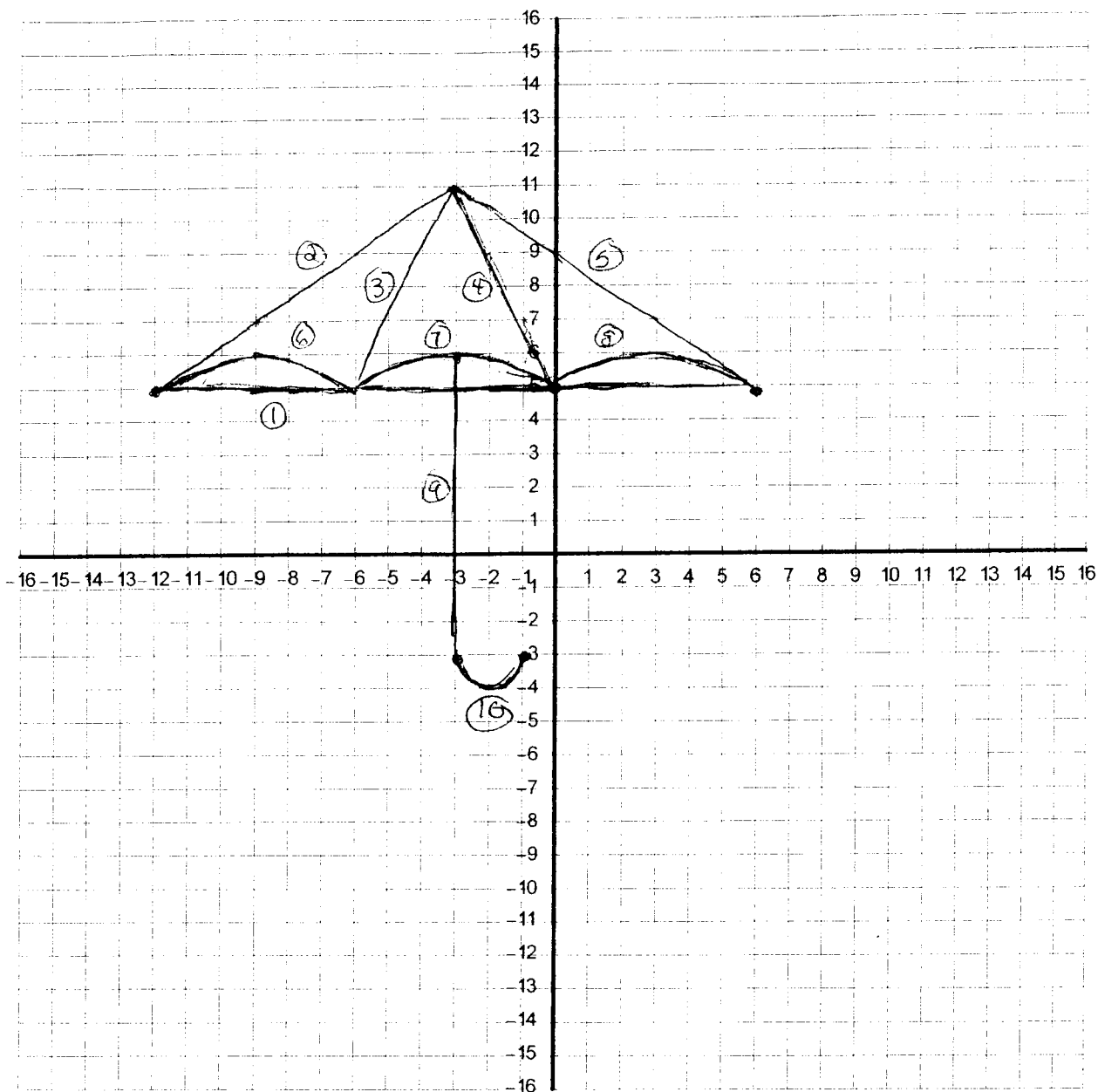
4) $x = 10$ for $-7 \leq y \leq 16$

6) $y = -\frac{1}{4}(x-6)^2 + 13$ for $4 \leq x \leq 8$

8) $(x-6)^2 + (y-10)^2 \leq 4$

10) $y = -x+7$ for $0 \leq x \leq 3$

13) $y \geq 0.1x^2 - 5$ for $-8 \leq x \leq 8$



1) $y=5$ for $-12 \leq x < 6$

3) $y=2x+17$ for $-6 \leq x < -3$

5) $y=-\frac{2}{3}x+9$ for $-3 \leq x < 6$

7) $y=-.1112(x+3)^2+6$ for $-6 \leq x < 0$

9) $x=-3$ for $-3 \leq y < 6$

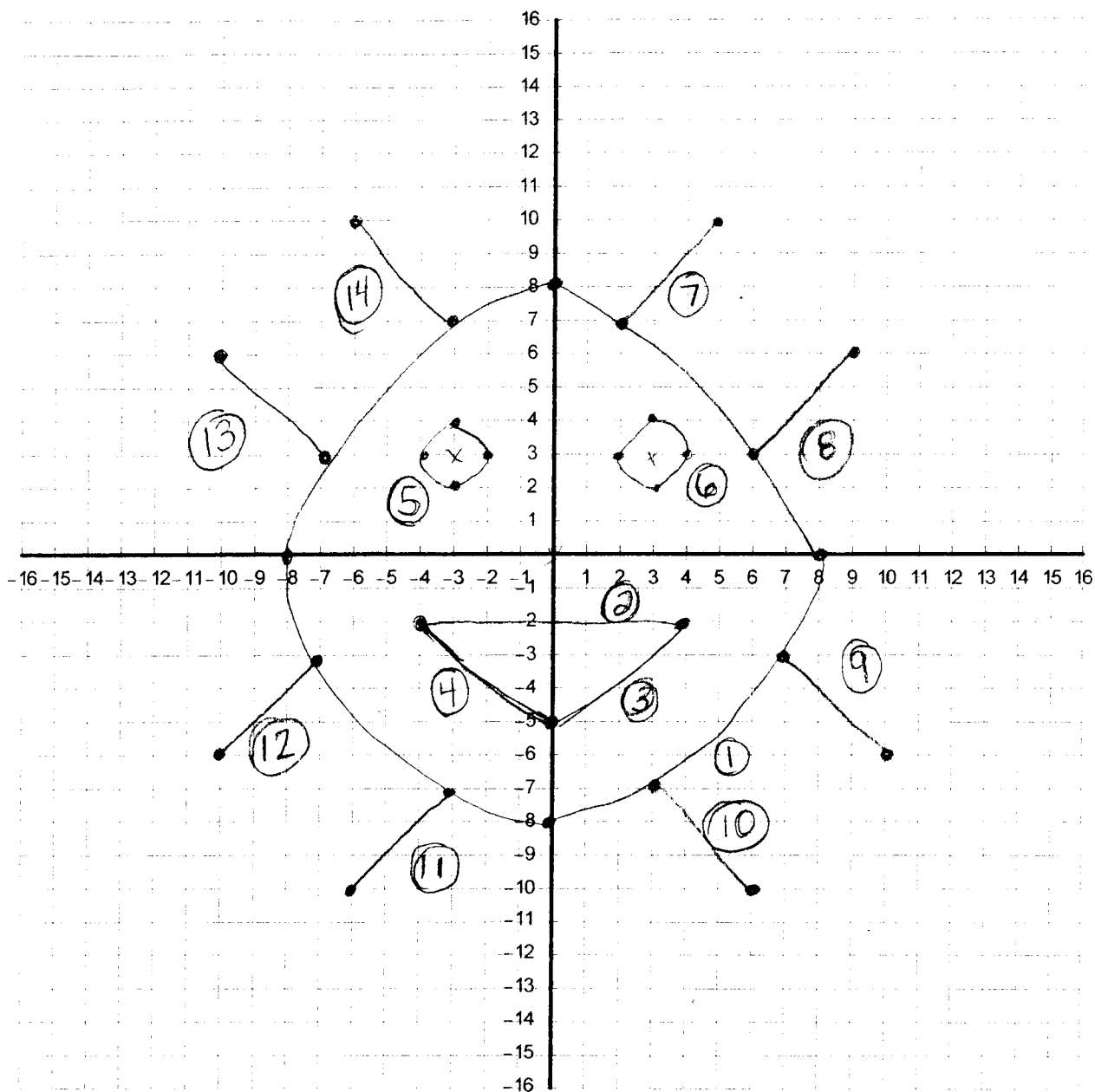
2) $y=\frac{2}{3}x+13$ for $-12 \leq x < -3$

4) $y=-2x+5$ for $-3 \leq x < 0$

6) $y=-.1112(x+9)^2+6$ for $-12 \leq x < -6$

8) $y=-.1112(x-3)+6$ for $0 \leq x < 6$

10) $y=(x+2)^2-4$ for $-3 \leq x \leq -1$



1) $(x-0)^2 + (y-0)^2 = 64$

3) $y = \frac{2}{3}x + 0$ for $0 < x < 4$

5) $(x+3)^2 + (y-3)^2 = 1$

7) $y = x + 5$ for $2 < x < 5$

9) $y = x + 4$ for $7 < x < 10$

11) $y = x - 4$ for $-6 < x < -3$

13) $y = x - 4$ for $-10 < x < -7$

2) $y = -2$ for $-4 < x < 4$

4) $y = -\frac{2}{3}x + 0$ for $-4 < x < 0$

6) $(x-3)^2 + (y+3)^2 = 1$

8) $y = x - 3$ for $6 < x < 9$

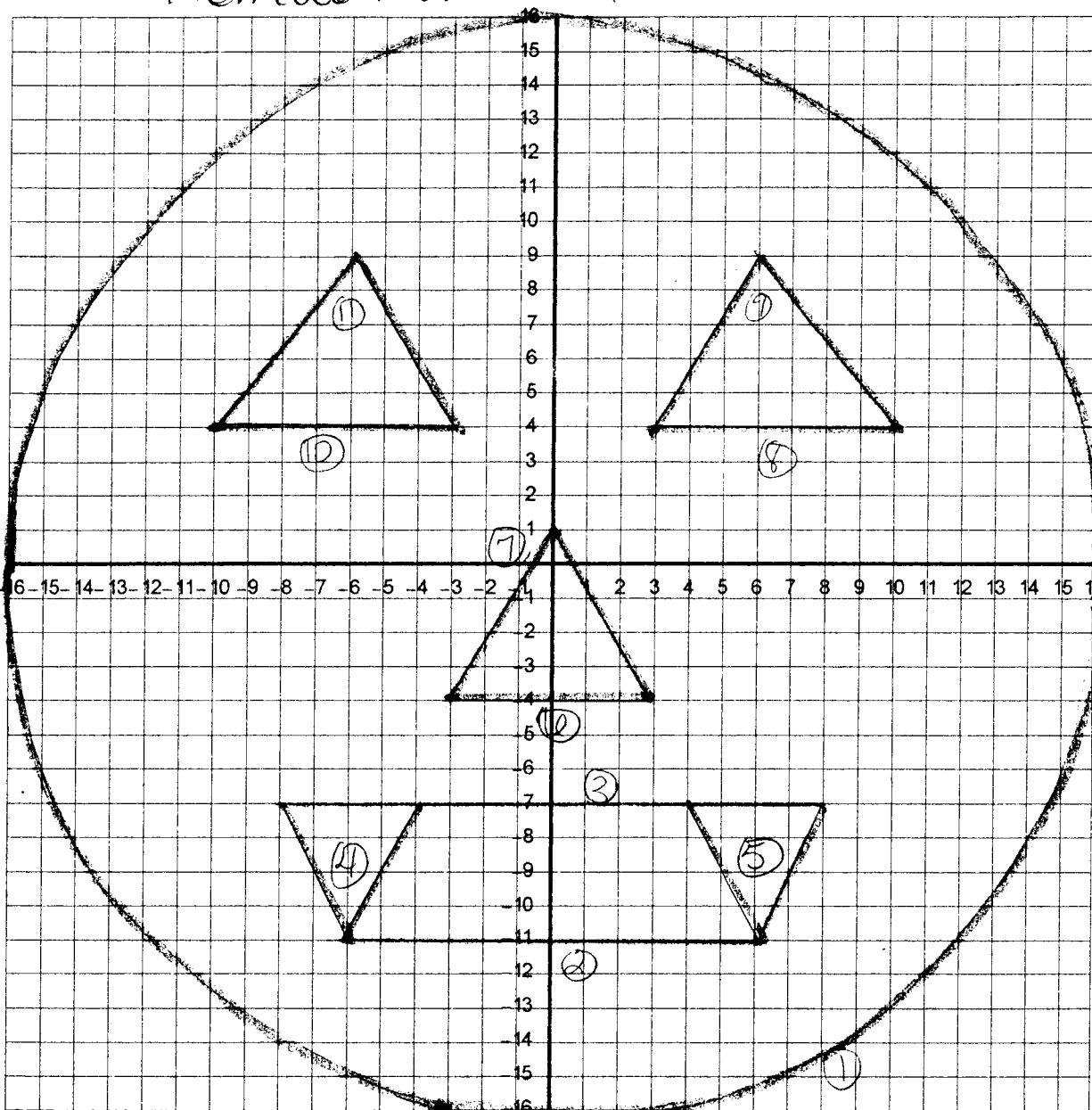
10) $y = x - 4$ for $4 < x < 6$

12) $y = x + 4$ for $-10 < x < -7$

14) $y = x + 4$ for $-6 < x < -3$

MAC1105 College Algebra
Homework 2

Picture



1) $(x-0)^2 + (y-0)^2 = 250$

3) $y = -7$ for $-8 \leq x \leq 8$

5) $y = |x-6| - 11$

7) $y = -|x| + 1$

9) $y = -|x-6| + 9$

11) $y = -|x+6| + 9$

2) $y = -11$ for $-10 \leq x \leq 10$

4) $y = |x+6| - 11$

6) $y = -4$ for $-3 \leq x \leq 3$

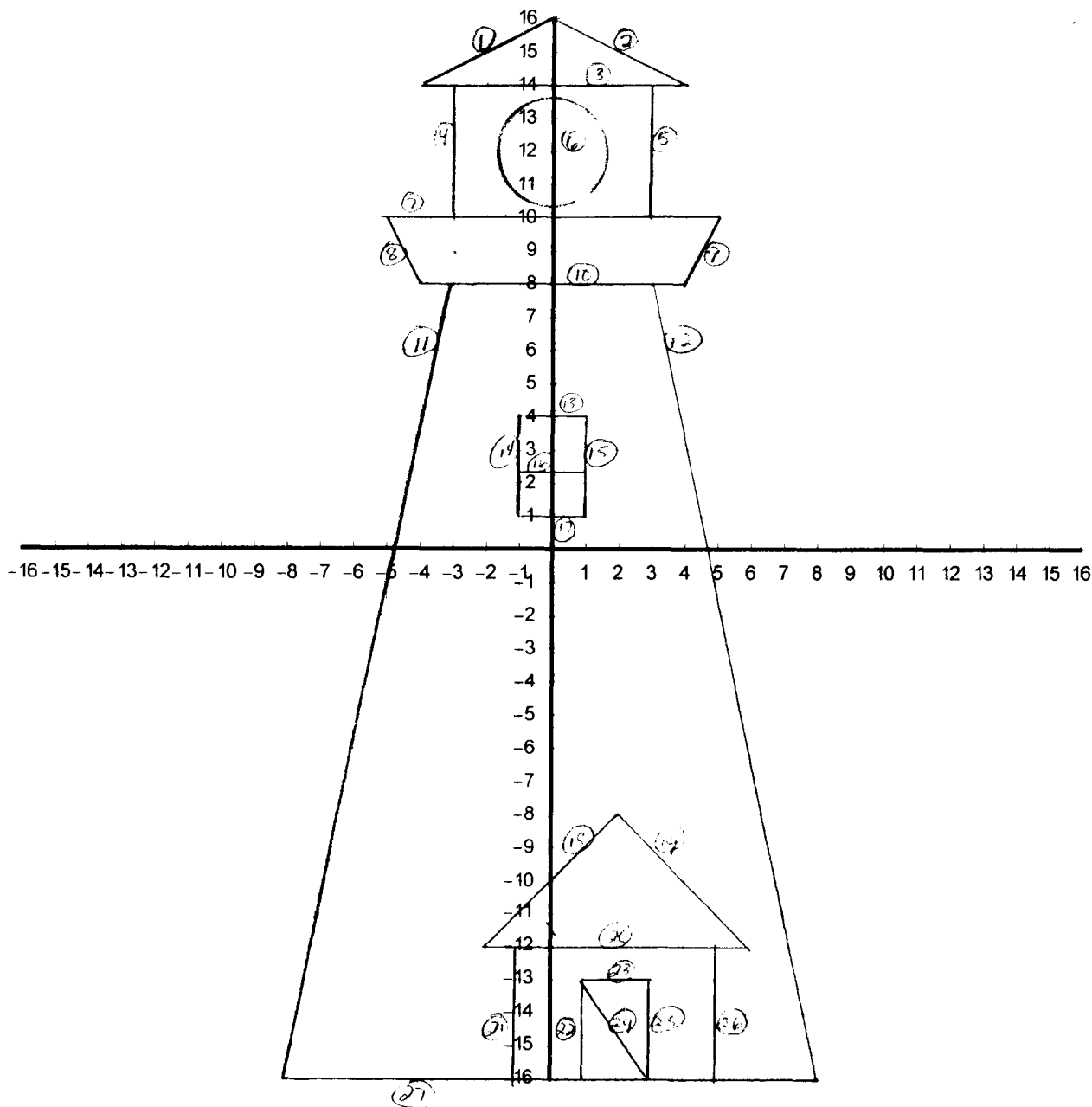
8) $y = 4$ for $3 \leq x \leq 10$

10) $y = 4$ for $-10 \leq x \leq -3$

Tybee Island Lighthouse, Savannah GA,

Home work

①



1) $y = \frac{1}{2}x + 16$ for $-4 \leq x \leq 0$

3) $y = 14$ for $-4 \leq x \leq 4$

5) $x = 3$ for $10 \leq y \leq 14$

7) $y = 10$ for $-5 \leq x \leq 5$

9) $y = 2x$ for $4 \leq x \leq 5$

11) $y = 5x + 24$ for $-8 \leq x \leq -3$

13) $y = 4$ for $-1 \leq x \leq 1$

2) $y = -\frac{1}{2}x + 16$ for $0 \leq x \leq 4$

4) $x = -3$ for $10 \leq y \leq 14$

6) $(x-0)^2 + (y-12)^2 = 2.25$

8) $y = 2x$ for $-5 \leq x \leq -4$

10) $y = 8$ for $-4 \leq x \leq 4$

12) $y = -5x + 24$ for $3 \leq x \leq 8$

14) $x = -1$ for $1 \leq y \leq 4$